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☐ check if this entity will manage funds if an award is made. Name and address:

13. Governing control of applicant [5]* (turn page for selections) * if 6, please specify _____

14. Type of organization [14]* (turn page for selection) select only one * if 14, please specify private, non-profit

15. Employer identification number 14-1368361

16. Type of project (turn page for selections) [2] select only one

17. Use of technology: [ ] check box if application proposes the use of hardware and/or software as a significant aspect of the project.

18. GRANT AMOUNT REQUESTED $ 154,324 .00 **19.** Amount of Matching Funds $ 76,071 .00

20. Grant Period (Starting Date) 10 /01 / 99 — 09 / 30 /00 (Ending Date)

21. Identify other Federal agencies that either have contributed support or have a pending proposal for support of these project activities and indicate the amount of support contributed or requested.

Name of Agency	Contributed/Pending	Amount
N/A		

22. In the space below, include the names of any organizations that are official partners of the project.
Urban Libraries Council

23. Certification: _Bonnie F. Morris_   19 Mar 99
Signature of Authorizing Official   Date

ABSTRACT.
THE IMPACTS OF THE INTERNET ON PUBLIC LIBRARY USE

The State University of New York (SUNY) at Buffalo, in collaboration with the Urban Libraries Council, requests $I 54,324 from the Institute of Museum and Library Services to investigate the impact of the Internet on public library use. The Co-Principal Investigators for the project are Dr. George D'Elia, Professor and Director of the Center for Applied Research in Library and Information Science at SUNY at Buffalo, and Eleanor Jo Rodger, President of the Urban Libraries Council.

The applicants propose to develop a segmentation model of the American market for information services and resources based on the market's use of the public library and its use of the Internet. We have defined the segments of this market as follows:

- people who use the public library and who have access to the Internet and use it;
- people who use the public library and who have access to the Internet but do not use it;
- people who use the public library and who do not have access to the Internet;
- people who do not use the public library and who have access to the Internet and use it;
- people who do not use the public library and who have access to the Internet but do not use it;
- people who do not use the public library and who do not have access to the Internet.

We propose to design and conduct a national telephone survey that will accomplish four goals: 1) to estimate the size of each of the segments identified above; 2) to describe the information-seeking behaviors of the people in each segment of the model as these behaviors relate to their educational, cultural, occupational, recreational, and life-tending needs; 3) to analyze the reasons why the people within each segment choose to use either the library or the Internet (or both or neither) to satisfy their needs; and 4) to describe the demographic characteristics of each segment and the relationships of these characteristics both to the information-seeking behaviors described above and to the use or nonuse of the public library and the Internet.

These data will enable us to document how and in what ways people are currently using the public library and the Internet and to analyze those areas in which libraries and the Internet are competing and those areas in which they are complementary. With the creation of these baseline data, the library profession will be able with future replications to monitor the changes in the sizes of the segments (i.e., migrations of people from one segment to others) and the changes in consumer behavior as the full impacts of the Internet become more manifest. With these data, public libraries will understand better the information needs of their communities in the digital age; how and in what ways people are using the Internet and public libraries to satisfy their educational, cultural, occupational, recreational, and life-tending needs; and the current, and potential, impact of the Internet on public library use. This information is essential to public libraries so that they can better understand their emerging roles in the digital marketplace and, armed with this knowledge, they can better plan their services for the 21st century.

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3. NARRATIVE

1.   NATIONAL IMPACT

Funders say it. Elected officials say it. In their private moments even library leaders and advocates say it. "In this age of the Internet will we still need public libraries? If so, what roles will public libraries play in the21st century?" While there are many opinions about what the future of the public library might be, and while there are many exhortations about the need to transform the public library in order to maximize the benefits of the new technologies,' there are no data documenting the current impact of the Internet on the information-seeking behaviors of people and their use of the public library. This research project will be the first national project to investigate the impacts of the Internet on public library use. It will document the changing information-seeking behaviors of people as they evaluate these two sources of information and begin the process of integrating, in varying degrees, these two sources into their lives. Consumers are now testing and evaluating these two sources and our understanding of the outcomes their evaluations will be vital to the future of the public library in the 21st century as people truly become lifelong learners. We propose to conduct a national telephone survey designed to describe and analyze the current consumer market for public library services and Internet services.' We have defined the segments of this market as follows:

- people who use the public library and who have access to the Internet and use it;
- people who use the public library and who have access to the Internet but do not use it;
- people who use the public library and who do not have access to the Internet;
- people who do not use the public library and who have access to the Internet and use it;
- people who do not use the public library and who have access to the Internet but do not use it;
- people who do not use the public library and who do not have access to the Internet.

The survey will further segment the population based on whether library users make use of the Internet while at the library, and whether Internet users make use of library web sites. Data will be gathered to estimate the percentage of the national population that comprises each segment; to describe the information-seeking behaviors of the people in the segment as these behaviors relate to their educational, occupational, cultural, recreational, and life-tending needs; to describe the reasons why the people within each segment choose to use the library or the Internet (or both or neither) to satisfy these needs; and to describe the demographic characteristics of each segment.

We think that this proposed project is of enormous importance to the public libraries of this nation. Libraries are struggling to understand their futures, to plan their services, and to communicate effectively about them. They are making huge investments in digital technology while still attempting to run their traditional print on paper services. They are being forced to make strategic decisions about their futures and yet they have only rhetoric and anecdotes to guide them. Without reliable data describing the information-seeking behaviors and preferences of people to guide them, public libraries could very well flounder and dissipate their precious resources pursuing unattainable goals while missing promising opportunities.

When the study is complete the profession will know, for the first time, 1) what proportions of the population are using the Internet and public libraries; 2) why people are using the Internet and/or the public library, described in terms of the information needs they seek to satisfy; 3) the reasons why people decide to use one or the other; and, most importantly, 4) the relationships between the needs that motivate the use

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[1] See, for example, The Benton Foundation (1996), Kniffel (1996), Schaefer (1997), Bales (1998), and Sager (1999).
[2] The public library and the Internet provide a variety of information resources and services. For case of presentation in thisproposal we use the term "services" to refer inclusively to all manifestations of these resources and services.

and the decision criteria that determine whether the Internet or the library is used. This information is vitally important to the future of public libraries. It will enable the public libraries to identify their roles in the digital age, to communicate these roles to their communities, to identify how best to use digital technologies to serve their users, to plan their services with better knowledge of why and how people are using the library and the Internet, and to allocate their resources in accordance with their community roles and their service plans.

It is also important to note that when this study is complete the library profession will have baseline data estimating the sizes of the segments in the national model describing the position of the library in the digital marketplace. Over time, with replications of the survey, the profession will be able to monitor changes in the library's position within the digital marketplace as the full impact of the Internet becomes manifest and as people's behaviors adapt to the impacts of the new technologies.

2. ADAPTABILITY

Given that the impacts of the Internet, while experienced locally by public libraries, will be national in scope, the segmentation model that this project proposes to develop will be a national model relevant to the future of all public libraries. However, given that the membership and behavior of people within segments might be affected by their demographic characteristics and further given that libraries serve diverse communities, the future will arrive differently for different libraries. Whatever strategies are ultimately developed for competing with, or complementing, the functionalities/services of the Internet, each public library will be able to adapt them to its local situation in ways that best serve its community needs.

In addition, the instrumentation developed for the national survey will be available for local and/or state level replication for those who require situation specific information. While some aspects of this study might not be appropriate for academic and school libraries, we believe that the general approach of studying library and Internet use and uses could be easily adapted for use by these other library communities enabling them to plan their services more skillfully.

3. DESIGN

The project, described below, will be conducted by a team of researchers from the State University of New York (SUNY) at Buffalo and the Urban Libraries Council under the direction of Dr. George D'Elia, Professor and Director of the Center for Applied Research in Library and Information Science at SUNY at Buffalo, and Eleanor Jo Rodger, President of the Urban Libraries Council. The project will also have an Advisory Committee of four public library directors and one state librarian. Detailed descriptions of the personnel involved in this project are provided on pages 7 - 9 of this Narrative. The evaluation of the execution and the outcomes of the project are discussed on page 9 of this Narrative.

The project team will conduct a national telephone survey of adults,[3] I8 years of age or older, that will be designed to accomplish two goals: 1) to develop a segmentation model of the population based on people's use of the public library and people's access to, and use of, the Internet; and 2) to analyze the information-seeking behaviors of the people in each segment of the model as these behaviors relate to their educational, cultural, occupational, recreational, and life-tending needs. The project has been designed to be executed in five stages. However, before we describe the activities involved in each of these stages, we provide a more detailed description of the segmentation model which is at the heart of this project. The full segmentation model, based on people's use of the public library and people's access to, and use of, the Internet, has 35 potentially meaningful segments. For ease of presentation, however, we have reduced the full model to six general segments which are described below. A schematic representation of the full model is presented on page 12 and a schematic representation of the reduced model is presented on page 13.

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[3] The survey population will be limited to adults, 18 years of age or older, for two reasons. First, interviews with minors under the age of 18 would require the prior consent of the minor's parent (or legal guardian); and second, given the different levels of comprehension that would have to be anticipated for the various age levels of minors, different sets of questionnaires would have to be developed to correspond to these various levels of comprehension. Both of these requirements would complicate considerably the conduct of the survey and both would add substantially to its cost. The study of the impacts of the Internet on children (age 17 or younger) and their use of the public library is an important area of investigation that, should this proposal be funded, we intend to pursue next year.

The Segmentation Model

Segment 1 will include those people who are currently using both the library and the Internet. Within this segment there will be a number of sub-segments of which the two most important are 1) those people who have access to the Internet either at home or at work; and 2) those people who have access to the Internet only through the public library.

For the first sub-segment, people who have access to the Internet at home or at work, it will be important to ascertain why these people are using the Internet (i.e. what functionalities/resources are being used for what purposes), why these people are using the library (i.e. what services/resources are being used for what purposes), why people choose to use the Internet over the library in some situations, and why they choose to use the library over the Internet in others. In effect, we need to identify the decision criteria that people are using to decide when to use the Internet and when to use the library. The analyses of the behavior of the people in this segment will provide us with indications of the degree to which the library and the Internet are viewed by the public as competing or complementary service providers and the relative strengths and weaknesses of each.

The second sub-segment will be people who have access to the Internet only through their public library. In addition to the information obtained about the first sub-segment above, it will also be important to estimate the size of this sub-segment and to document the characteristics of its members. Given that public libraries have invested so much in providing access to the Internet to those who have no other source of access, it will be important for the field to follow this sub-segment carefully over time in order to determine if this sub-segment decreases in size as the Internet becomes accessible to more households and to investigate if access from home changes the library use behavior of these people.

Segment 2 will include those people who use the library and who have access to the Internet but do not use it. Within this segment, in addition to the information about library use, it will be important to ascertain why these people choose not to use the Internet.

Segment 3 will include people who use the library but who do not have access to the Internet either at home or the office or their local library. In addition to the information about their library use, it will also be important to estimate the size of this segment and to ascertain their interest in getting access to the Internet. Once these baseline data have been obtained, it will be important to monitor changes in the size and behavior of this segment over time as people obtain access to the Internet and migrate to other segments.

Segment 4 will include people who do not use the library but who use the Internet. In addition to their reasons for not using the library and their reasons for using the Internet, it will be important to identify from among the people in this segment how many are former users of the library who are now "lost" to the Internet and why they have changed their behavior.

Segment 5 will include people who do not use the library and, while they have access to the Internet, do not use the Internet. In addition to their reasons for not using the library, it will be important to identify their reasons for not using the Internet, and to describe their educational, occupational, cultural, recreational, and life-tending needs.

Segment 6 will include people who do not use the library and who do not have access to the Internet. For the people in this segment, it will be important to identify their reasons for non-use of the library; to describe their educational, occupational, cultural, recreational, and life-tending needs and to ascertain how the library might meet these needs; and to determine if they have plans to connect to the Internet in the near future.

We now present the five stages of the project.

Stage 1: Operationalization of the Data Requirements

The questionnaire to be administered during the telephone survey will begin with a set of screening questions about library use and access to, and use of, the Internet which will permit us to assign respondents to appropriate segments. The questionnaire will then have eight sets of questions, combinations of which will be asked of the respondents depending on the segments into which they have been assigned.

These sets of questions will include questions about

1)   why people use the library, described in terms of their information-seeking behaviors related to their educational, occupational, cultural, recreational, and life-tending needs (segments 1,2,3 in Figure 2);
2)   the reasons why people do not use the library (segments 4,5,6 in Figure 2);
3)   why people use the Internet, described in terms of their information-seeking behaviors related to their educational, occupational, cultural, recreational, and life-tending needs (segments 1,4 in Figure 2);
4)   what decision criteria are used when people choose between the Internet and the library(segment I in Figure 2);
5)   the reasons why, when available, the Internet is not used (segments 2,5 in Figure 2);
6)   the informational requirements of the people who do not use either the library or the Internet described in terms of their educational, occupational, cultural, recreational, and life-tending needs (segments 5, 6 in Figure 2);
7)   whether people anticipate getting access to the Internet in the near future (segments 3,6 in Figure 2);
8)   the demographic characteristics of people in all segments.

Question sets #7 and #8 are straightforward and will not require substantive investments in development. Question sets #1, #2, and #6 have been developed and tested in other surveys and will require only minor adjustments for use in this proposed survey. However, in the context of this proposed research, question sets #3,#4, and #5 (to be asked of segments 1, 2, 4, and 5) are unique and will have to be developed and tested prior to the national survey. In order to develop these question sets, we propose to conduct a series of four group interviews with randomly selected representatives of segments 1, 2, 4, and 5 (one group for each segment). The prospective participants in the group interviews will be identified by means of telephone screening interviews conducted in the Buffalo [NY] metropolitan area. We will identify and invite 14 respondents for each of the four groups. In order to identify the 56 invited participants, we anticipate having to complete about 500 screening interviews. We will offer each participant a $75 honorarium and anticipate that, for each 14 people who are invited, about 8-10 will actually show up. The group interviews will be structured so as to solicit from the members their insights about why they use the Internet and what services/functionalities they use; what decision criteria they use when they choose between the Internet and the library; and the reasons why, when available, the Internet is not used. A description of all eight sets of questions follows.

Question set #1: why people use the library described in terms of their educational, occupational, cultural, recreational, and life-tending needs

This set of questions will be designed to describe why people use the library. These questions will be based on the service responses for public libraries developed by the Public Library Association (PLA) which defines a service response as "what a library does for, or offers to, the public in an effort to meet a set of well-defined community needs" (Himmel and Wilson, 1998, p. 54). These service responses represent the distinct ways that libraries serve the public. PLA identified the following sets of service responses: Basic Literacy, Business and Career Information, Commons (a public place for public discourse), Community Referral, Consumer Information, Cultural Awareness, Current Topics and Titles, Formal Learning Support, General Information, Government Information, Information Literacy, and Local History and Genealogy. These service responses provide a useful model for assessing why, and in what ways, people use libraries. Descriptions of these service responses have been used successfully by D'Elia (Co-Principal Investigator) in a telephone survey of residents of Riverside County, California. Users of the library were read a description of each service response and after each description they were then asked if the described service response was a reason why they had used the library. In this manner, library users were able to identify both the reasons why they used the library and the kinds of services they used.

Question set #2; why people do not use the public library

From previous community telephone surveys, D'Elia has developed a set of questions which solicit the reasons why people do not use the public library. In the context of this study, these possible reasons will be augmented to include possible competition from the Internet.

Question set #3: why people use the Internet described in terms of their educational, occupational, cultural, recreational, and life-tending needs

One of the principal activities during this phase of the project will be to develop a set of questions pertaining to use of the Internet that are comparable to the use questions for libraries. There is a growing body of literature dealing with the reasons why people use the Internet and what they use it for. For example, the 9th GVU WWW User Survey (Georgia Institute of Technology, 1998) reports that the primary reasons that users in the U.S. used the Internet were as follows: gathering information for personal needs, entertainment, education, work/business, shopping/gathering product information, time-wasting, and communication with others (not including email). These reasons are roughly comparable to corresponding service responses for public libraries described above and it appears possible to develop an extended list of reasons for using the Internet that would mirror most, if not all, of the PLA service responses. In this manner we will have a set of common reasons for using libraries and the Internet which will enable us to describe how and for what reasons people choose to use one over the other and, over time, to study which service/functionalities will be preferred by users. These reasons for using the Internet will be tested in the group interviews discussed above.

Question set #4: what decision criteria are used by people choosing between the Internet and the library

For people who use the Internet and the public library, it will be important to identify the criteria that are used in deciding which information provider to use. These decision criteria could be modeled after channel selection criteria from communication theory (Allen, 1977), task-technology fit criteria from management information systems theory (Lunin and D'Elia, 1996), or criteria for evaluating digital information resources(Smith, 1997). These literatures will provide the pool of possibilities that will be tested in the group interviews discussed above. These decision criteria could include, for example, accessibility, ease of use, timeliness, reliability, accuracy, comprehensiveness, etc.

Question set #5: why people do not use the Internet even when it is available

For people who have access to the Internet and do not use the Internet, it will be important to identify the reasons for nonuse especially in relation to their use or nonuse of the library. The objectives will be to identify their decision criteria, to understand how and why they apply them, and to analyze the implications of their behavior for the future of the library. These reasons for not using the Internet will be tested in the group interviews discussed above.

Question set #6: the informational requirements of people who do not use either the library or the Internet described in terms of their educational, occupational, cultural, recreational, and life-tending needs

For people who do not use either the library or the Internet we shall develop sets of questions designed to ascertain their current educational, occupational, cultural, recreational, and life-tending informational requirements. The objective here will be to determine what potential might exist for converting these people into users of either the library or the Internet by reducing barriers (or improving access) or modifying services or developing other strategies.

Question set #7: whether people intend getting access to the Internet and if so, when

For people who do not as yet have access to the Internet it will be important to determine if and, if so, when they intend to get access to the Internet. The objectives here will be to estimate how quickly the members of this segment will be migrating to other segments of the model and to analyze its implication for libraries.

Question set #8: the demographic characteristics of all of the people who participate in the survey

All people will be asked a common set of demographic questions. These demographics will be modeled after the demographics proposed for use in the 2000 census.

Stage 2: Design and Pre-testing of the Instrument

The eight sets of questions will be formatted into the telephone interview questionnaire and then submitted to a pilot survey to be conducted in the Buffalo [NY] metropolitan area. The results of the pilot

survey will be analyzed and, as necessary, the questionnaire will be revised to be sure that the kinds of data needed are actually being captured by the questionnaire. Based on previous experiences, we anticipate that we shall need about three such pilot surveys (of approximately 100 completions each) to ensure that the questionnaire meets the requirements of the project.

Stage 3: The Execution of the National Telephone Survey

The national telephone survey will be executed by Goldhaber Research Associates[4] (GRA) under sub-contract to the State University of New York at Buffalo. GRA will be responsible for drawing the national probability sample and for interviewing the subjects. Given that we do not know before hand what the segment sizes will be, we are requesting funds to achieve a national sample of 3,000 completions which should be adequate to ensure that each segment is sufficiently large for drawing inferences with a reasonable degree of confidence. We note at this time that GRA will also be responsible for the screening interviews for, as well as the management of, the focus groups described in Stage 1. GRA will also be responsible for conducting the pilot surveys described in Stage 2.

On completion of the survey, GRA will weight the results of the survey to conform to the best available estimates of the demographic characteristics of the population of the United States and forward the survey database to the research team for analysis.

Stage 4: The Creation of the Data Base and the Analyses of the Data

The research team will format the weighted survey database into an SPSS[5] system file and will analyze the data in accordance with the objectives of the project. The data analyses will be reviewed by all members of the research team and the Advisory Committee to ensure conformity to the project objectives and to identify any potentially fruitful avenues of further investigation that might be suggested by the data.

Stage 5: The Writing and Dissemination of the Final Report

The Co-Principal Investigators, Dr. George D'Elia and Eleanor Jo Rodger, will share primary responsibility for writing the final report. Drafts of the report will be reviewed by members of the research team and by the Advisory Committee. The drafts will be revised as needed until both the research team and the Advisory Committee agree that the document accurately reports the results of the project and is ready for dissemination. (The plans for disseminating the results of the project are discussed on page 9.)

4. MANAGEMENT PLAN

Responsibility for the intellectual integrity of the project, as well as overall responsibility for the successful conclusion of the project, will reside with the Co-Principal Investigators.

Responsibility for the operational management of the project, that is, the management of the resources necessary to accomplish each of the five stages of the project outlined above, will reside with Dr. D'Elia. He is an experienced researcher who has successfully managed and completed 28 grants and contracts valued at approximately $1.4 million. The schedule for accomplishing these activities is presented in the Attachments.

Responsibility for the execution of the national telephone survey will reside with Goldhaber Research Associates, under subcontract to the State University of New York at Buffalo, with oversight by Dr. D'Elia.

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[4] Goldhaber Research Associates is a market research and polling firm founded by the late Marshall McLuhan and Gerald Goldhaber. It has a state of the art Computer Assisted Telephone Interview (CATI) system and employs a staff of 40 interviewers and eight computer and research professionals, many of whom are drawn from the ranks of students and faculty at the University at Buffalo. Dr. Goldhaber is the former Chair of the Department of Communication at the University of Buffalo. A full description of the firm is presented in the Attachments.

[5] SPSS (1998), the Statistical Package for the Social Sciences is the leading statistics application for the analysis of survey data.

Fiscal responsibility for the contract will reside with the Research Foundation of the State University of New York, Office of Sponsored Programs Administration.

5.   BUDGET

The estimated cost of the project is $230,386 of which the applicants are requesting $154,324 from the IMLS. The budget is presented on pages 15 - 19. Based on our experiences with the design, execution, and analysis of large scale surveys, we are confident that the personnel and resources requested for the project are adequate to successfully complete the activities of the project.

Given that the project will design, execute, analyze, and report the results of a national survey, the costs of the project are reasonable. We note, also, that in addition to Goldhaber Research Associates, we solicited cost estimates for the national telephone survey from the Gallup Organization. The cost estimate from the Gallup Organization was $138,016, considerably more expensive than the cost estimate from GRA which was $87,000. We are confident that the sub-contracted cost of the telephone survey is cost-effective.

The principal outcomes of this project, the market segmentation model documenting the current impact of the Internet on public library use and the analyses of the information-seeking behaviors of the consumers in the model, are essential information for planning library services in the 21st century. The benefits to be derived from this project appear to be well worth the cost of the project and represent a cost-effective use of Federal resources.

6.   PERSONNEL

The project will involve a team of collaborating researchers from the School of Information and Library Studies and the Department of Communication at SUN-Y at Buffalo and from the Urban Libraries Council. Collectively, these researchers have expertise in the areas of public librarianship, information technologies, information science, cognitive processes, communication, and the Internet. Their research skills encompass both qualitative and quantitative methods especially in the areas of group interviews, information needs assessment, survey research, and statistical analysis of survey data. The project team will also include a research assistant, and an Advisory Committee. The national telephone survey will be sub-contracted to Goldhaber Research Associates.

We provide below short descriptions of key personnel in the project. We note their principal areas of responsibility and their average time commitments for the project. The specific task responsibilities for each member of the research team with estimated time commitments for each activity in the project are presented in the Attachments.

Co-Principal Investigator. Dr. George D'Elia is Professor and Director of the Center for Applied Research in Library and Information Science at the State University of New York at Buffalo. He holds a Ph.D.(1975) and an M.L.S (1967) in librarianship from Rutgers University and an M.S. (1977) in statistics from Syracuse University. Prior to this position he was for ten years a professor in the Information and Decision Sciences Department of the Carlson School of Management at the University of Minnesota. Dr. D'Elia's areas of expertise include public libraries, planning and evaluation of information systems and services, survey research methods, analysis of statistical data, and the applications of quantitative methods to managerial decision making. His research addresses the assessment of information needs, user behavior, and the evaluation of information systems and services. He has authored over 70 reports and papers - many of which have been published in the leading journals in the field including Library Journal, Public Libraries, Library Quarterly, Library and Information Science Research, Journal of Academic Librarianship, and Journal of the American Society for Information Science. He won the Research Paper Competition of the Library Research Round Table in 1980,1982, and 1984, and the Research Paper Competition of the Association for Library and Information Science Education in 1990 and 1995. He has also presented over 40 professional development workshops for librarians in the United States and Canada on the design of surveys and the statistical analysis of data. He will commit to the project an average of 13.3% of his time during the academic year and 25% of his time over the summer.

Co-Principal Investigator. Eleanor Jo Rodger is President and CEO of the Urban Libraries Council, an association of public libraries serving every major metropolitan region of the United States. She holds an M.L.S. from the University of Maryland (1979). Prior to her position at ULC, she was for six years Executive Director of the Public Library Association. In addition to serving as a national spokesperson for public library

development and a leader in the future assessment for public library services, Rodger is an experienced researcher. Early in her career she co-authored Output Measures for Public Libraries (1987) the first manual of measurement and evaluation in the profession. She has conducted numerous evaluation studies of library operations, has served frequently as a strategic planning consultant, and has served as co-investigator, with Dr. D'Elia, for numerous studies of public library use. Currently she serves as Principal Investigator for a qualitative research project, "Library Literacy Programs: The Leaders' Roles" funded by the Lila Wallace-Reader's Digest Fund. She has participated in numerous federally funded research advisory committees including those which provided oversight for the establishment of the Federal State Cooperative System which gathers national data about public libraries within the Office of Educational Research and Improvement, The Public Library Effectiveness Study conducted by Drs. Thomas Childers and Nancy Van House, and the above mentioned Gallup Organization study of public opinion of the importance of the public library. She will commit an average of 7.5% of her time to the project.

Dr. Corinne Jorgensen is Assistant Professor in the School of Information and Library Studies at SUNY at Buffalo. She holds both an M.L.S. (1988) and a Ph.D. (1995) in Information Transfer from Syracuse University. Her areas of expertise include information technology, digital libraries, and qualitative research methods. Her research focuses on the cognitive needs of users within both manual and computerized information systems. She has conducted research on the information needs of users of information systems, users of back-of-the-book indexes, and users of image collections. Her special expertise relating to the requirements of this project lies in qualitative methodologies such as focus groups, personal interviews, think-aloud protocols, and content-analysis. Dr. Jorgensen will take the lead in developing the agendas for the focus group interviews, in conducting the focus groups, in analyzing the transcripts of the focus groups, and in writing the reports of the results. She will commit to the project an average of 9.4% of her time during the academic year and 5% of her time over the summer.

Dr. Joseph Woelfel is Professor in the Department of Communication at SUNY at Buffalo. He received his Masters (I 963) and Ph.D. (I 968) in Communication from the University of Wisconsin at Madison. He has served on the faculty of the University of Illinois, Michigan State University, and the State University of New York at Albany, where he was Professor of Communication and Director of Research and Founding Fellow of the Institute for the Study of Information Science. He was Senior Fellow at the East West Center in Honolulu, a Fullbright scholar in the former Yugoslavia, and Senior Fellow at the Rockefeller Institute of Government at the State University of New York. His areas of expertise include the measurement of human communication, artificial neural networks and intelligent systems, and mapping the Internet. He is a principal developer of extensive computer software, including the suite of Galileo programs, and CATPAC, a text analysis program utilizing artificial neural technology. Dr. Woelfel will contribute to developing the agendas for the focus group interviews, will assist in conducting the focus groups, and will assist in analyzing the transcripts of the focus groups. He will collaborate with Dr. D'Elia in developing the questionnaire for the national survey and in analyzing the results of the survey. He will commit to the project an average of 7.8% of his time during the academic year and 10% of his time over the summer.

The project will also have a research assistant (RA) who will commit an average of 50% of his/her time to the project. The RA will assist the investigators in the myriad of chores associated with managing and executing a research project of this magnitude; most notably in the areas of managing the various data files generated by the focus groups, the pilot surveys, and the national survey, as well as managing the text files during the writing of the final report.

The Advisory Committee. The project will be guided by an Advisory Committee composed of four library directors from urban and suburban communities as well as one state librarian from a state with substantial numbers of rural libraries. The Advisory Committee includes Dr. Rick Ashton, City Librarian, Denver [CO]Public Library; James Fish, Director, Baltimore County [MD] Public Library; Howard McGinn, City Librarian, New Haven [CT] Public Library; Gail Rogers, Cobb County [GA] Public Library; and Sara Parker, Missouri State Librarian. The Advisory Committee will meet twice at ULC Headquarters in Evanston [IL] during the project

- near the beginning of the project to review the information obtained from the focus groups and to provide guidance in its use in the development of the questionnaire; and

- toward the end of the project to review the results of the data analyses, to consider the implications of the findings, and to help shape the final report.

In addition, the Advisory Committee will be on call throughout the project to provide guidance to the Principal Investigators as issues and concerns arise, and will both aid in the creation of a dissemination plan and participate in it as presenters of the research in a variety of professional settings. Their involvement in the project will help to ensure that the project yields practical information and that the results of the project have credibility within the public library community. The members of the Advisory Committee will contribute their time to the project at no cost.

7.   EVALUATION

Given the nature of this research project, three outcomes can be evaluated: 1) the intellectual integrity and the practical usefulness of the segmentation model that is developed; 2) the successful completion of the national survey and the subsequent completion of the national segmentation model including the analyses of the information-seeking behaviors of the segments within the model; and 3) the usefulness and impact of the national segmentation model to the library profession.

Since the development of the segmentation model in this proposal requires a set of interdependent activities to be accomplished in a linear fashion, the completion of each activity will result in an outcome that will be evaluated and must be judged acceptable before the project can proceed to the next activity. For example, stage I will result in the operationalization of the data elements to be obtained in the national survey that will be used to develop the segmentation model. These data elements will be evaluated by the research team to ensure that they are theoretically appropriate and by the Advisory Committee to ensure that they have practical utility. The successful completion of stage I will then lead to stage 2, the design and pre-testing of the instrument with three pilot surveys. The successful completion of stage 2 will then lead to stage 3, the execution of the national survey by GRA. The successful completion of stage 3 will then lead to stage 4, the analyses of the data and the development of the national segmentation model. The successful completion of stage 4 will then lead to stage 5,the writing of the final report which will be reviewed by both the research team and the Advisory Committee. The expertise, experience, and integrity of the research team, assisted by the timely review of the Advisory Committee, will ensure that each activity is accomplished successfully before subsequent activities are initiated.

The usefulness of the segmentation model will depend on two factors: 1) the speed and comprehensiveness of the dissemination activities; and 2) the ability of the library profession to address the implications of the model. The project has articulated a comprehensive set of dissemination activities (described below). The experience of the Urban Libraries Council in disseminating information and, perhaps more importantly, in fostering discussions among its membership (by means of listservs, newsletters, and national conferences) about important issues confronting public libraries, provides assurance that the profession will be informed about the segmentation model in a timely manner and that the directors of the largest public libraries in the country will have the opportunity to discuss its implications for public libraries.

8.   DISSEMINATION

There will be two key products from this research - the findings and the instrument. Both will be made widely available in the following ways:

Extensive news releases will be prepared and distributed to the national and professional press.

The final report will be sent to all members of the Urban Libraries Council and made available to others upon request .

Presentation will be made at an appropriate meeting of the full membership of the Urban Libraries Council.

Presentations will be sought for the first available Public Library Association National Conference (held every two years).

The findings as well as the finial report will be posted on the web sites of the School of Information and Library Studies at SUNY at Buffalo and the Urban Libraries Council. The postings will be made available to other web sites such as the Public Library Association, as appropriate.

Presentation opportunities will be sought before the Chief Officers of State Libraries (COSLA) and the National Commission on Libraries and Information Science (NCLIS).

At least one major summary article will be written and submitted to the professional press.

One article will be submitted to a periodical read by government officials such as Governing Magazine or Nation's Cities Weekly.

The questionnaire used in the telephone survey will be sent to each Chief Officer of a State Library Agency together with information on potential replication.

The questionnaire will also be made available on request to library directors and other individuals with an interest in public libraries.

9. CONTRIBUTIONS

The University at Buffalo and the Urban Libraries Council will contribute one-third of the salaries of the participants with a corresponding contribution of one-third of their fringe benefits. Goldhaber Research Associates has also agreed to contribute one-third of the costs of its sub-contracts. The University at Buffalo will also reduce its indirect rate of 54% (negotiated with the Federal Government) to 35%. These contributions sum to one third of the total costs of the project.

10. SUSTAINABILITY

The segmentation model will forever provide the baseline data describing the public library's position within the digital marketplace, as of the year 2000. All future studies can use these baseline data to measure changes in the marketplace as the digital revolution unfolds and as consumer behaviors change both in reaction to the technologies and to new opportunities for personal growth and development. In the future, the cost of replicating this study to monitor changes in the marketplace will be considerably less (measured in terms of 1999dollars) than the cost of this project, as the development costs will have been already incurred. We are confident that, given the importance of monitoring changes in the digital marketplace and further, given the reduced costs of replication, it will be possible to secure funding to replicate this survey periodically in the future.

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FIGURE 1
THE FULL SEGMENTATION MODEL

		INTERNET ACCESS					
		YES					NO
		HOME		OFFICE/SCHOOL		PUBLIC LIBRARY	
		USE		USE		USE	
		YES	NO	YES	NO	YES	NO	
LIBRARY USE	YES	VISIT						
		SURROGATE						
		TELEPHONE						
		DIGITAL						
	NO							

FIGURE 2
THE REDUCED SEGMENTATION MODEL

		INTERNET ACCESS		
		YES		**NO**
		USE OF THE INTERNET		**USE OF THE INTERNET**
		YES 22.4%[1]	NO 9.5%	NO 68.1%
L I B R A R Y	YES[2] 66%	Segment 1	Segment 2	Segment 3
U S E	NO 34%	Segment 4	Segment 5	Segment 6

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[1] The estimates for access to and use of the Internet are from the CyberStats Survey of Spring of 98 by Mediamark Research Inc. <hppt://www.mediamark.com/pages/cs_s98a.htm> which are cited in the Statistical Abstract of the United States 1998, U.S. Department of Commerce, Economics and Statistics Administration, Bureau of the Census, October 1998, page 574.

[2] The estimates of library use are from a survey commissioned by the American Library Association and conducted by Gallup Organization. The results of the survey were released by ALA in the summer of 1998 and are available from ALA.

Note: The size of the segments within the model are unknown. One of the objectives of this project is to collect the data that will allow us for the first time to estimate the size of these segments.

Schedule of Completion

	Oct. 1999	Nov.	Dec.	Jan. 2000	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
Stage 1 Data Requirements	—— $37,700.43											
Stage 2 Design\Pre-test of Instrument			—— $21,665.12									
Stage 3 National Survey					—— $66,750							
Stage 4 Data Analyses								—— $11,333.14				
Stage 5 Final Report										—— $16,875.32		
TOTAL										$154,324		

PROJECT BUDGET FORM FRONT
Section 1: Detailed Budget

Name of Applicant: State University of New York at Buffalo

Salaries and Wages (Permanent Staff)

Name (Base Salary)	Method of Cost Computation	IMLS	Match	Total
Total Salaries and Wages		30268 ✓	15142 ✓	45410 ✓

Salaries and Wages (Temporary Staff hired for the Project)

None

Fringe Benefits

	Rate	IMLS	Match	Total
Total Fringe		6330 ✓	3167 ✓	9497 ✓

Consultant Fees

None

Travel[6]

From ... To Chicago	Number of: Days	Subsistence Costs		Transportation Costs		IMLS	Match	Total
		Hotel	Meals	Air	Ground			
First Meeting of Advisory Committee								
Denver [CO]	2	350	150	358	100	958		958
Jefferson City [MO]	2	350	150	176	100	776		776
New Haven [CT]	2	350	150	344	100	944		944
Baltimore [MD]	2	350	150	154	100	754		754
Atlanta [GA]	2	350	150	169	100	769		769
Buffalo [NY]	2	350	150	317	100	917		917
Buffalo [NY]	2	350	150	317	100	917		917
Buffalo [NY]	2	350	150	317	100	917		917
Total Travel 1st Meeting						6952		6952
Second Meeting of Advisory Committee								
Denver [CO]	2	350	150	358	100	958		958
Jefferson City [MO]	2	350	150	176	100	776		776
New Haven [CT]	2	350	150	344	100	944		944
Baltimore [MD]	2	350	150	154	100	754		754
Atlanta [GA]	2	350	150	169	100	769		769
Buffalo [NY]	2	350	150	317	100	917		917
Buffalo [NY]	2	350	150	317	100	917		917
Buffalo [NY]	2	350	150	317	100	917		917
Total Travel 2nd Meeting						6952		6952
Total Travel Costs						13904		13904

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[6] These travel costs are based on advance purchase super saver airline tickets, $100 estimated ground transportation costs at both ends of the trips, and subsistence costs that ULC has, on average, paid for attendees at meetings in Evanston. While seemingly high, the subsistence costs are the going rates in Evanston.

Materials, Supplies, and Equipment

None requested.

_____

Services

Item	Method of Cost Computation	IMLS	Match	Total

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Other

		IMLS	Match	Total
Goldhaber Research Associates	Estimates based on costs previous projects			
Focus Groups (4)		9000	3000	12000
Pilot Surveys (3)		9000	3000	12000
National Survey		58000	29000	87000
Telephone service	$50 for 9 months	450		450
Mail\Courrier service	$13 X 5 for 9 months	585		585
Total Other		77035	35000	112035

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	IMLS	Match	Total
TOTAL DIRECT PROJECT COSTS	127537	53309	180846

INDIRECT COSTS

Applicant is using

*   A. an indirect cost rate which does not exceed 20% of direct costs

*   B. an indirect cost rate negotiated with a Federal agency (copy attached)

(Name of Federal Agency)   (Effective Date of Agreement)

DHHS   April 19, 1998

C. Rate base Amount(s)

35% of $76537

PROJECT BUDGET FORM
SECTION 2: SUMMARY BUDGET

Name of Applicant: The Research Foundation of State University of New York

DIRECT COSTS

	IMLS	MATCH	TOTAL
SALARIES AND WAGES	30268	15142	45410
FRINGE BENEFITS	6330	3167	9497
CONSULTANT FEES			
TRAVEL	13904		13904
SUPPLIES & MATERIALS			
SERVICES			
OTHER	77035	35000	112035
TOTAL DIRECT COSTS	127537	53309	180846
INDIRECT COSTS	25788	22752	49540

TOTAL PROJECT COSTS   230386

AMOUNT OF CASH-MATCH   0

AMOUNT OF IN-KIND CONTRIBUTIONS   110461

TOTAL AMOUNT OF COST SHARING (CASH AND IN-KIND CONTRIBUTIONS)   110461

AMOUNT REQUESTED FROM IMLS   154325

PERCENTAGE OF TOTAL PROJECT COSTS REQUESTED FROM IMLS   67%
(MAY NOT EXCEED 50% IF REQUEST IS ABOVE $250,000)

Have you received or requested funds for any of these project activities from another
Federal agency? (please circle one)
                Yes   (No)

If yes, name of agency   Date
Amount requested $

BUDGET NARRATIVE

The estimated cost of the project is $230,386 of which the applicants are requesting $154,324 from the IMLS. The budget is presented on pages 15 - 19. Based on our experiences with the design, execution, and analysis of large scale surveys, we are confident that the personnel and resources requested for the project are adequate to successfully complete the activities of the project.

Given that the project will design, execute, analyze, and report the results of a national survey, the costs of the project are reasonable. We note, also, that in addition to Goldhaber Research Associates, we solicited cost estimates for the national telephone survey from the Gallup Organization. The cost estimate from the Gallup Organization was $138,016, considerably more expensive than the cost estimate from GRA which was $87,000. We are confident that the sub-contracted cost of the telephone survey is cost-effective.

Travel costs for the two Advisory Committee meetings might at first glance seem high. However, these costs are based on past average costs that ULC has incurred for attendees at meetings at ULC. They are reasonable for the Evanston [IL] area.

The principal outcomes of this project, the market segmentation model documenting the current impact of the Internet on public library use and the analyses of the information-seeking behaviors of the consumers in the model, are essential information for planning library services in the 21st century. The benefits to be derived from this project appear to be well worth the cost of the project and represent a cost-effective use of Federal resources.